Mr.Ahmed ElBasha

Primary 6

Second Term General Revision

Model Answers

Student's book from page 90 till 122.
2019/2020

Name:……………………………………………………………………………………………….

Class:…………………………………………………………………………………………… …



Lesson (1-1) Exercises

P10 & 11 in the student's book

Q1:

a. Fulcrum
b. Lever
c. First class lever
d. Third class lever
e. Second class lever

Q2:

a. Increase the speed, increase the force and increase the distance.
b. First, third.
c. Scissors and seesaw.
d. Nutcracker and bottle opener.
e. Manual broom and coal holder.

Q3:

First third third

Second second

Q4:

First class: (scissors- hammer claw)

Second class: the resistance force is between the effort force and the fulcrum. (Bottle opener-wheel barrow)

Third class: the effort force is between the resistance force and the fulcrum. (Tweezers- hockey bat)

Lesson (1-2) Exercises

P18 & 19 in the student's book

Q1:

a. The force X its arm = The Resistance X its arm.
b. 2nd, 3rd.
c. Effort arm, resistance arm.
d. Force arm and resistance arm are equal.

Q2:

a. **Because the force arm is always bigger than the resistance arm.**
b. **Resistance arm is always bigger than the force arm.**
c. **The 2 arms are equal.**
d. **Some levers help us to perform the tasks more easily by increasing the distance of avoid dangers.**

Q3:

Figure (A) conserves the effort as it is a second class lever where the effort force is smaller than the resistance force.

Figure (B) doesn't conserve the effort as it is a third class lever where the effort force is bigger than the resistance force.

Q4:

The force X its arm = The Resistance X its arm. **500X20=200X……..**

$\frac{500X20}{200}$ **= 50 cm.**

Unit 1 Test

P22 & 23 in the student's book

Q1:

First class levers -------------levers that sometimes conserve the effort

Second class levers --------- levers that always conserve the effort.

Third class levers ------------levers that not conserve the effort.

The levers ---------------------a rigid bar rotates around a focal point, and is affected by a force and a resistance.

The fulcrum ------------------fixed point that a rigid bar sets on.

Q2:

a. **(X) second**
b. **(X) third**
c. **(X) first**
d. **(√)**
e. **(X) doesn't**

Q3:

a. 2nd
b. 3rd
c. 1st
d. R X its arm.
e. 1st

Q4:

definition	The fulcrum is between the force of effort and the force of resistance	The resistance is between the force of effort and the fulcrum	The effort is between the force of resistance and the fulcrum.
Conservation of effort	Sometimes conserve the effort	Always conserve the effort	Don't conserve the effort
examples	seesaw	Bottle opener	Hockey bat

Q5:

3rd 1st 2nd

3rd 1st 2nd

Q6:

200X50=100X……..

$\frac{00X50}{100}$ = 100 cm.

Q7:

……….X5=300X15

$\frac{300X1}{}$ = 900 N.

Lesson (2-1) Exercises

P35in the student's book

Q1:

a. Light bulb, fluorescent lamps.
b. Tungsten, melting point
c. Glass bulb, tungsten filament and the base.
d. Argon.

Q2:

a. Series
b. Electric lamps
c. Parallel connection

Q3:

a. It will melt at high temperature.
b. The filament will burn at high temperature.
c. When one of the lamps is damaged or turned off all the other lamps will turn off.

Q4:

a. They allow the electric current to pass from the base of the bulb to the tungsten filament.

b. All lamps functions alone and the lighting in each room is independent from the lighting in any other room.
c. As it has a high melting point.

Lesson (2-2) Exercises

P44-45in the student's book

Q1:

a. Copper, iron
b. Paper, plastic, wood
c. Electric shock, electric burns, electric fires
d. Electric burns
e. A good conductor of electricity.
f. Inserting several connections in one socket, not disconnecting the electric machines after usage and placing the machine that generates heat near to flammable material.
g. Electricity.
h. Strength of the current, time it took
i. Do not insert a metal object in the socket, do not place several connections in the same socket.
j. Touching a part of the body directly to an electric current source, touching fire or the spark resulting from the occurrence of an electric fire to a part of the body.

Q2:

a. Electric shock
b. Electric fires
c. Electric burns
d. Electric shock
e. Electric fires

Q3:

a. Electric shock
b. Electric fires
c. Electric burns

Unit 2 Test

P48-49 in the student's book

Q1:

a. Parallel, series



b. Do not insert a metal object in the socket, do not place several connections in the same socket.
c. Battery, wires, lamb and electric switch.
d. Plastic, rubber and wood
e. Series way

Q2:

a. Light
b. Tungsten
c. Series
d. Fluorescent lamps
e. Electric shock
f. Parallel
g. In parallel
h. Argon
i. copper

Q3:

a. Because the air contains oxygen that helps in burning while inert gas does not help in burning
b. Because metal things are good conductor of electricity and it may lead to electric shock.
c. To connect the electricity
d. To avoid electric fires.

Q5:

a. Conducting materials
b. Electric fires
c. Non-conducting materials (insulators)
d. Series way
e. Electric lamps
f. Parallel way
g. Electric shock
h. Electric burns

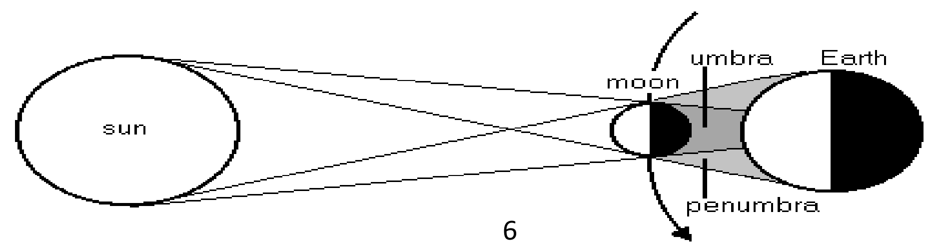
Lesson (3-1) Exercises

P58- 59 in the student's book

Q1:

Partial solar eclipse **Annular solar eclipse**

Q2:



Q3:

a. **Its ray harms the eye and it can lead to blindness within a few minutes.**
b. **The cone shadow doesn't reach the earth surface.**
c. **Due to the difference in the part of the sun that the moon hides during its passage in front of the sun.**

Lesson (3-2) Exercises

P65 in the student's book

Q2:

a. √ b. √

Q4:

Because the earth has a great size relative to the moon so it always blocks all sunlight when it comes between the sun and the moon on the same straight line.

Lesson (3-3) Exercises

P71 in the student's book

Q1:

a. **To find the suitable reasons for the astronomical phenomena that he observed in the sky.**
b. **To determine the start of the holy month of Ramadan through a clear vision atmosphere.**
c. **To obtain a clear vision for the space and monitoring it accurately**

Unit 3 Test

P74-75 in the student's book

Q1:

a. **Its ray harms the eye and it can lead to blindness within a few minutes.**

b. Due to the difference in the part of the sun that the moon hides during its passage in front of the sun.
c. Because the earth has a great size relative to the moon so it always blocks all sunlight when it comes between the sun and the moon on the same straight line
d. To obtain a clear vision for the space and monitoring it accurately.
e. To explore the outer space.
f. Because the moon hides all the sunlight from the earth as the moon size seems nearly equal to that of the sun.

Q2:

a. Solar eclipse, moon
b. Lunar eclipse, earth
c. Telescopes, observatories.
d. Annular.

Q3:

a. √
b. X Galileo
c. √
d. √

Q4:

a. It is the dark inner shadow in which the total solar eclipse appears.
b. It is the faint outer shadow in which the partial solar eclipse appears.
c. Is formed in the shadow area of the moon in which we cannot see the sun completely.
d. In the semi-shaded area of the moon, we can see a part of the sun forming what is known as the partial solar eclipse.
e. When the moon comes in an orbit higher from earth as it revolves around it in an oval orbit, the cone shadow does not reach the earth's surface
f. Occurs when the whole moon enters the shadow area of earth.

Q6:

a. Telescope
b. Total lunar eclipse
c. The partial lunar eclipse
d. Lunar eclipse

Lesson (4-1) Exercises

P84-85 in the student's book

Q1:

a. 3
b. 2
c. 1
d. 2
e. 2

Q2:

a. Osmosis
b. Root hair
c. Transpiration
d. xylem
e. Guard cell

Q3:

a. Osmosis
b. Root hair
c. Sticky
d. Transpiration
e. Guard cells

Q4:

1. Epidermis
2. Cortex
3. Endodermis
4. Xylem

Root hair
Shoot system
Root system

Unit 4 Test

P88-89 in the student's book

Q1:

a. 1
b. 3
c. 3

Q2:

a. Transpiration
b. Osmosis
c. Root hair
d. Guard cells

Q3:

a. X root hair
b. X transpiration
c. X stomata

Q5:

a. Is losing of water in the shape of water vapor from the leaves or from other green parts to its surroundings through holes in the plant leaves.
b. Is the transmission of water molecules through a semi-permeable membrane from an area with a high concentration of water to an area of low concentration.

First Exercise

P90-91-92-93 in the student's book

Q1:

1. c
2. b
3. b
4. c
5. a
6. c
7. b
8. c
9. c
10. b
11. a
12. a



Q2:

X=2 Newton

Y=10 cm

Q3:

1. **Because these machines are beneficial in other things such as increasing the distance, speed or precision.**
2. **Because the two arms are different**
3. **Because it makes the tasks perform more easily by increasing the speed or distance, avoid dangers and moving the force from one place to another.**
4. **Because it has a high melting point which protect it from melting in high temperature.**
5. **Because in parallel connection way if one lamp is damaged or turned off the other lamp won't be affected.**
6. **Because it carries the lamp upright and connects the lamp with the electric current.**
7. **Because it helps the root hair in penetration of soil particles to absorb the water from it.**
8. **Because the salt concentration inside the plant cells is larger than the salt concentration inside the soil.**
9. **Because the plant loses water in the form of water vapor through these holes so-called stomata.**
10. **Because the epidermal cells are lost from time to time by the resistance of soil particles during the expansion of the root.**
11. **To regulate the opening and closing of these stomata during the transpiration process.**
12. **To allow the penetration of water and salts through it.**
13. **Because non-conducting materials such as wood does not allow the electricity to pass through it.**

Q4:

1. **Solar: the moon is in the middle.   Lunar: the earth is in the middle**
2. **Series: connection of lamps is by one after one, while Parallel: connection of lamps is in branching.**



3. 3rd class the force is in the middle   1st class the fulcrum is in the middle.
4. Good: allow the electricity to pass through. Insulators: do not allow.

Q5:

Q6:

Force x its arm = resistance x its arm

100 x 25 = 500 x X

X= $\frac{100x25}{500}$ = 5 cm.

Second Exercise

P94-95 in the student's book

Q1:

1. Good conductors of electricity
2. Lever
3. Galaxies
4. Transpiration

Q2:

1. b
2. c
3. a

Q3:

1. If one lamp is damaged or turned off the others will turn off.
2. Total lunar eclipse
3. Partial lunar eclipse

Q4:

1. √
2. X
3. X
4. √
5. X

Q5:

1. **Because it has a high melting point which protect it from melting in high temperature.**
2. **Because argon is an inert gas that increase the life time of the filament and protect it from burning.**
3. **To regulate the opening and closing of these stomata during the transpiration process.**
4. **Because water is a good conductor material of electricity that may lead to increase the electric fires.**

Q6:

1. **It is the result of an electric current passing through the human body.**
2. **It is the type of solar eclipse in which the sun appears as a lighting ring and it is formed when the moon is in a higher orbit from the Earth.**
3. **Astronomical observatories that study stars and galaxies from their location outside Earth's atmosphere.**
4. **The group of millions of stars forming beams of light in the middle of extreme darkness in the space.**
5. **Is losing of water in the shape of water vapor from the leaves or from other green parts to its surroundings through holes in the plant leaves.**
6. **Allow of some salts to pass through according to the plant's need.**

Third Exercise

P96-97-98-99-100-101-102-103-104-105-106-107-108-109-110

In the student's book

Q1:

1. **Lever**
2. **Rigid bar**
3. **1^{st}, 3^{rd}**
4. **Thomas Edison**
5. **Parallel**
6. **Argon**
7. **Conductors, insulators.**
8. **Electric shock**
9. **Earth, sun and moon.**
10. **Spiral, four.**
11. **Sticky**
12. **Selective.**

Q2:

1. 2^{nd} class lever.
2. Law of lever
3. Filament
4. Levers
5. Series connection way
6. Electric insulator
7. Partial lunar eclipse
8. Galaxies
9. Telescope
10. Stomata
11. Transpiration.

Q3:

1. To make it easier to reach the burnt out lamp and replace it while other lamps are not affected.
2. Its rays harm the eye and it can lead to blindness within a few minutes.
3. Because the effort force is always bigger than the resistance force
4. To allow the electric current to pass through it.
5. To prevent the electric current from reaching the human body.
6. As the electric load increase that lead to electric fires.
7. When the moon comes between the sun and earth in different positions.
8. Because it emits rays that harm the eye and it can lead to blindness within few minutes.
9. To expose and direct the telescope towards any part of the sky.
10. To find suitable reasons for the astronomical phenomena that he observed in the sky.

Q4:

1. X
2. X
3. √
4. X
5. X
6. X
7. √
8. √
9. X
10. √
11. √
12. √
13. √
14. √
15. √

Q5:

1. c
2. b
3. a
4. c
5. b
6. b
7. c
8. b
9. d
10. c
11. c
12. b

Q6:

1. 2^{nd}
2. Inactive
3. Wires
4. Second
5. Two filament of tungsten
6. Light
7. Water
8. copper
9. Tentatively
10. Annular
11. Galileo
12. Root hair
13. Two guard cells
14. Transpiration

Q8:

(1)

1-b

2-c

3-a

4-g

5-d

(2)

1-c

2-b

3-e

(3)

1-c

2-b

Q9:

1. The tasks will be hard to be performed
2. We can't observe space and study it.
3. Total lunar eclipse will occur.

4. Total solar eclipse will occur.
5. This lever conserves the effort.
6. Copper filaments will melt at high temperature.
7. The filament will burn
8. It can cause a lot of dangers such as electric shock, electric fires and electric burns.
9. The electric current won't pass through the circuit.
10. It may lead to electric shock if someone touches it.
11. The rays will harm the eye and may lead to blindness for few minutes.
12. The plant will not be able to lose the excess water in the form of water vapor.
13. To lose the water in the form of water vapor
14. The Stoma will not be able to open and close during transpiration.
15. Plant won't be able to absorb the water from the soil
16. It will be hard for the root hair to penetrate the soil in order to absorb water form it.
17. Water will not pass through the membrane from the soil to the plant.
18. Forming the umbra and penumbra area.
19. Water will increase the electric fire.

Q10:

First question:

1. Electric lamp
2. Wires
3. Positive pole
4. Battery

Second question:

1. Epidermis
2. Cortex
3. Endodermis
4. Xylem

Third question:

1. Penumbra area
2. Moon
3. Sun
4. earth

Q11:

1. Resistance arm= 4 cm.
2. Resistance force= 100 Newton
3. Resistance force= 320 Newton
4. Force arm= 10 cm

Test 1 p.111-112

Q1

a. Fulcrum
b. Electric fires
c. Root hair
d. transpiration

Q2

a. X
b. X
c. X
d. √
e. X

Q3

a. 2^{nd}
b. Electric current
c. Stoma
d. Resistance X its arm

Q4:

Solar eclipse	Lunar Eclipse
When the moon lies between the earth and the sun at one straight lines	When the earth comes between the moon and the sun at one straight line.
Solar eclipse always occurs in the morning.	Can be seen from any point on the earth at night.
Causing blindness and needs precautions from direct looking at it.	Doesn't require precautions or warning to look at it. Has no harms.
Duration doesn't exceed 7 minuets.	Duration is two hours or more.

1- Electric conductors	2- Electric insulator
Materials that allow electricity to flow through it	Materials that do not allow electricity to flow through it.
Examples	Examples
metal materials (aluminium - iron - copper) - water.	(plastic, rubber, wood, and glass).



Q5

a. Because the light of the sun passes in straight lines and if a dim object as the moon or the earth obstruct it, a shadow is formed.
b. To avoid the occurrence of electric fires.
c. Because in the first class levers only, the effort arm may be equal to the resistance arm as the fulcrum is in the middle.
d. Because they occur as a result of the earth and the moon rotation which can be calculated by scientists.

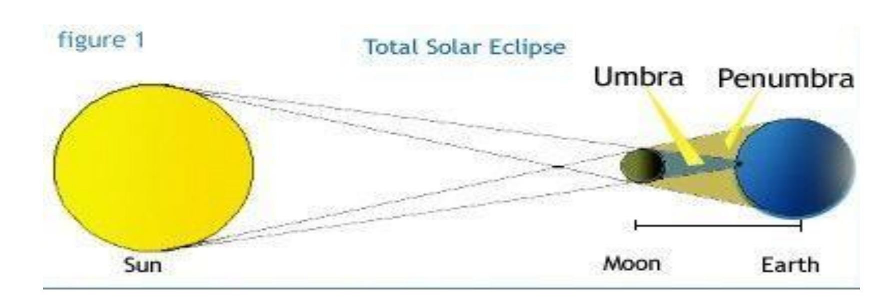
Q6

Force x its arm = resistance x its arm

500 x 20 = 200 x ….

The resistance arm= $\frac{500 \times 20}{200}$ = 50 cm

Q7



Test 2 p.113-114

Q1:

a. 1
b. 2
c. 4
d. 1

Q2:

1. To allow the passage of mineral salts and water from soil to the plant.
2. Because sometimes in the 1st class levers, the force arm is longer than the resistance arm.

3. Because argon in an inert gas which resist the high temperature while the atmospheric air has oxygen which helps in burning.
4. Because the water is a good conductor of electricity.
5. To avoid harmful ultraviolet rays which causes blindness for several minutes

Q3:

(A)
1- It melts easily at which electric current pass through
2- He effected by electrical shock
3- Plant can't absorb water and mineral salts then it die.
(B)
1- Used in houses – offices, decorating stores.
2- A device that collects light to see the distant objects on earth or planets and stars clearly to form magnified photos of celestial bodies.

Q4:

a)

Total solar eclipse	Partial solar eclipse
The earth lies in the shadow area of the moon that equal 250 K.m radius in which we can't see the sun completely.	The earth lies in the semi – shaded area (penumbra) we can see a part of the sun.

2nd Class lever	3rd Class lever
Class 2 Lever: Fulcrum, Load, Effort	Class 3 Lever: Fulcrum, Effort, Load
The Resistance is between the Effort and the Fulcrum.	The Effort is between the Resistance and the Fulcrum.
- Wheel barrow. - A bottle opener. - Nut cracker. - Stapler.	- Fishing tool. - Manual broom. - Ice holder. - Tweezers.

b)

1- Is a rigid bar that rotates around a fixed point called the fulcrum and is affected by effort force and resistance force.
2- Is the losing of water in the shape of water vapor from the leaves or from other green parts to its surroundings through holes in the plant leaves called "stomata".

Q5:

1. Good
2. total
3. Water only
4. Of stars
5. Lower surface

Test 3 p.115-116

Q1:

a. 2
b. 2
c. 1
d. 2
e. 2

Q2:

1. Because the force arm is always shorter than the resistance arm.
2. To connect the electricity from the base to the filament.
3. Because the epidermal cells are lost from time to time by the resistance of soil particles during the expansion of the root
4. Because it emits harmful ultraviolet rays which causes blindness for several minutes.
5. To allow the transportation of water from the soil to the plant.

Q3:

a)

1- Plant can't lose excess water so no pressure formed and plant can't absorb water and salts
2- The filament will burn
3- The outer space and astronomical phenomena still un known for us
b)

1- Lose excess water in form of water vapour
2- Increase force

Q4:

a)

2-	Series connection	Parallel connection
	When we cut one of these routes or one lamp burns, the electric current doesn't continue to flow and all the bulbs are turned off.	When we cut one of these routes, or the lamp burns the electric current moves in other bulbs and bulbs still light.

b)
1-The fixed point of a rigid bar rotate on.
2-Is the losing of water in the shape of water vapor from the leaves or from other green parts to its surroundings through holes in the plant leaves called "stomata".

3-The phenomenon by which water transports from the soil to the inside of the root hairs .from high concentration to low concentration

Q5:-
1- X 1st class
2- √
3-X oval shape with four arms
4-X converge
5- √

Test 4 p.117-118

Q1:-

a) 1 b)1 c) 2 d) 2

Q2:-

a) series
b) transpiration
c) galaxy

Q3:-

1- X thin
2- X lower surface
3- X Jupiter
4- X solar eclipse
5- X bec. its light glows like neon
6- √

Q4:-

1- to pass easily through soil particles

2- to avoid turned off of other lamps at which any lamp turned off or broken

3- wrong question (don't conserve) correct " 2nd " bec the force arm longer than resistance arm

4- to protect filament from burning and increase its life time

Q5:-

a)Don't place several connections in the same socket.

b) Don't insert a metal object in the socket (Nail, screw driver, metal wire).

c) Place a piece of plastic in the socket to prevent inserting any object in it.

d) Don't touch the electric machines that are connected to the electric current with wet hands.

Q6:-

force x its arm = resistance x its arm
50 x20 =resistance X 5
Arm of resistance = 50X 20 /5 = 200 cm

Test 5 p.119-120

Q1:-

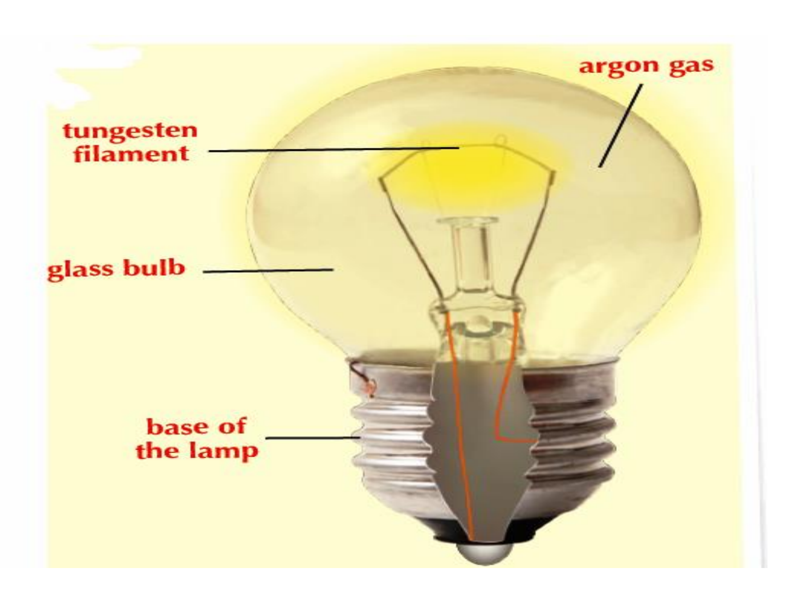
1- effort force – resistance
2- force – resistance
3- direct injuries – indirect injuries
4- moon – earth

Q2:-

(A)

1- 3rd class lever
2- semi shaded lunar eclipse
3- parallel

(B)



Q3:-

A)

1- to loss excess water in form of water vapor through transpiration process
2- bec moon all time smaller than earth
3- bec force arm all time longer than resistance arm

B)

1- Materials that allow electricity to flow through it
2- When a part of the moon enters the shadow area of the earth.

Q4 :-

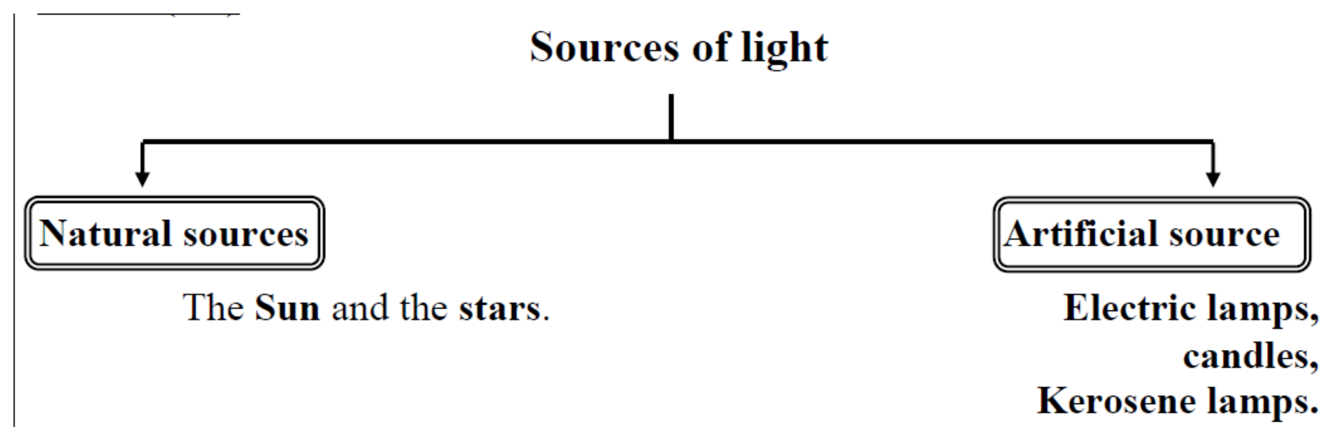
A) 1- X 2nd 2- √ 3- X inert argon 4- √ 5- X 7mniute and 40 sec

B)

1-

Solar eclipse	Lunar Eclipse
When the moon lies between the earth and the sun at one straight lines	When the earth comes between the moon and the sun at one straight line.
Solar eclipse always occurs in the morning.	Can be seen from any point on the earth at night.
Causing blindness and needs precautions from direct looking at it.	Doesn't require precautions or warning to look at it. Has no harms.
Duration doesn't exceed 7 minuets.	Duration is two hours or more.

2-



C)

Force x its arm = resistance x its arm

200 x 50 = 1000 x 10

10000 = 10000

BALANCED

It saves the effort because the effort force is less than the resistance force.

Test 6 p.121-122

Q1:-

1- force - fulcrum
2- sun –moon
3- Galileo - telescope
4- stomata – transpiration

Q2:-

1- 1st class lever
2- galaxy
3- root hair
4- electric lamp

Q3:-

A-

1- bec force arm all time shorter than resistance arm so force is greater than resistance

2- bec it absorbs water through osmosis from high concentration to low concentration

3- to avoid electrical shock during dial with

B-

1- danger of electricity due to pass of electricity through human body

2- astronomical phenomena at which earth found between sun and moon in nearly one straight line

Q4:-

A-

1- √ 2- √ 3-X short age 4-X Jupiter

B-

force x its arm = resistance x its arm

500 X 10 = 200 X 20

$5000 \neq 4000$

Not balanced, Because the two sides are not equal .

THE END ☺